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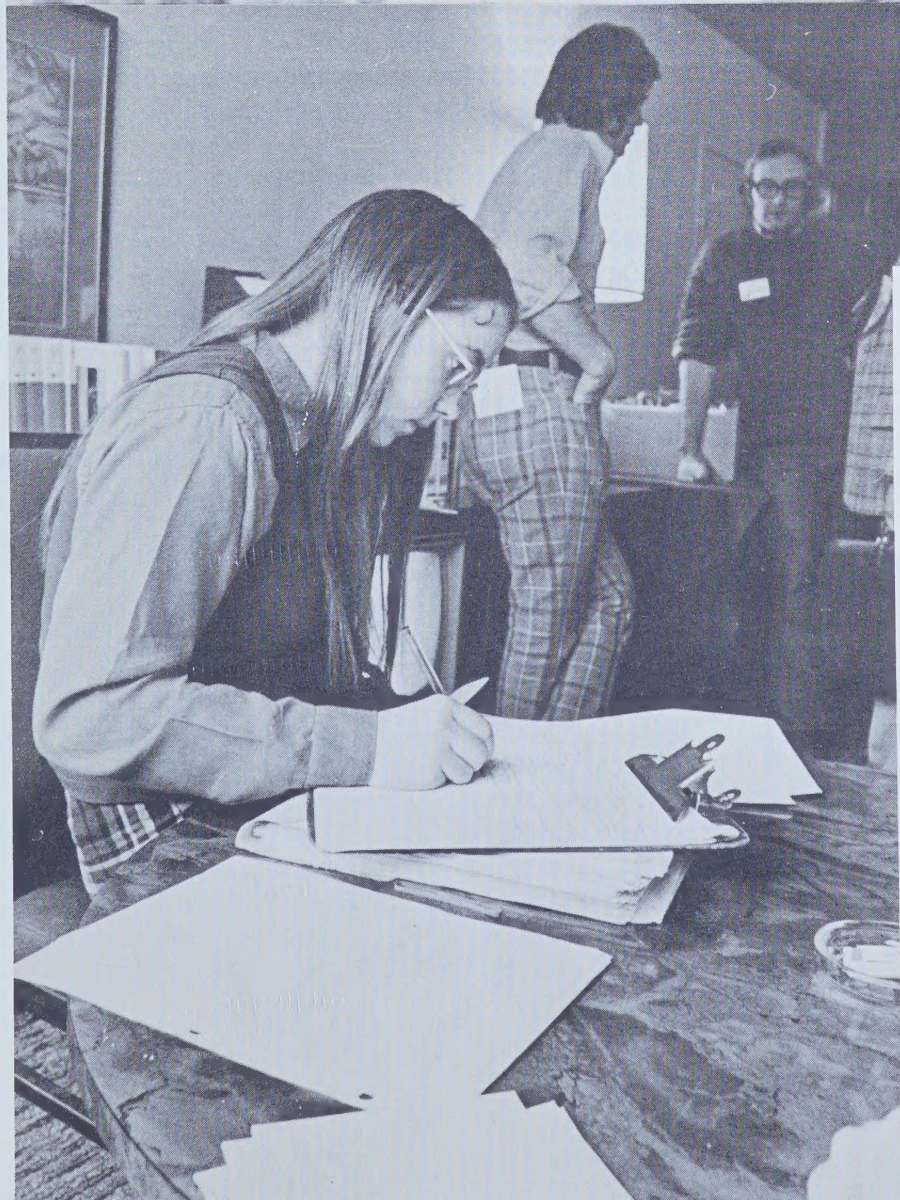
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*Delegates at the
closing conference*

see page 4



**Man and
Resources**

ENVIRONMENT NEWS

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No. 5

Minister:

Hon. W. J. Yurko

Deputy Minister:

Dr. E.E. Ballantyne

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Smog alerts

Control plan developing

An air pollution contingency plan is being developed by the environment department to prevent harmful levels of pollutants from building up in Calgary and Edmonton.

Details have not been decided but will likely include a series of increasingly tough control measures as levels of carbon monoxide, oxides of nitrogen, oxidants, particulates and sulphur dioxide rise.

The department has available a computer listing of industries in the city, their pollutant levels and the telephone number of the persons to call.

By late 1975, four monitoring stations should give continuous pollution level readings and a mathematical air pollution model (EN. Sept.-Oct., '73, pg. 14) will be able to make pollution predictions based on weather information and monitoring results.

Jerry Lack, head of air pollution control, said that initially industry cuts to control pollution would likely be voluntary.

Last year, Edmonton Power reduced production at its Rosedale generating plant in the centre of the city four times when oxides of nitrogen reached high levels.

The pollutant normally dissipates in the atmosphere but can be trapped under certain weather conditions such as an inversion where warm air aloft acts as a cap over the city.

In the case of automobile pollution--which is the source of 49 per cent of Edmonton's pollutants and 86 per cent of Calgary's--motorists would be asked to form car pools or use public transit, Mr. Lack said.

Toronto and four Ontario cities have had smog alert plans since 1970 and they are widespread in the United States.

Livestock guidelines proposed

A feedlot operation with 400 cattle produces about as much waste each day as a town of 4,000 people.

All towns of that size in Alberta have at least primary sewage treatment but facilities at equivalent feedlots are generally less extensive.

A Code of Practice for confinement livestock facilities has been published by the environment and agriculture departments to help improve waste management and reduce pollution.

Operators which meet the standards can apply for a Certificate of Compliance.

Although certification is currently voluntary, it is recommended for operators starting new facilities, expanding or remodelling old ones, all those with intensive operations and those near population centres or water bodies.

A confinement facility is defined as one in which 10 or more animal units are fed and reared in an enclosed area.

An intensive operation has more than 200 animal units in an enclosed area where each animal unit has less than 4,000 square feet.

An animal unit is equivalent to one cow, five feeder hogs, 50 lambs, 100 mink or 200 hens.

Besides improving waste management and pollution control, the code's objectives are to:

- familiarize producers with agencies having jurisdiction over livestock production facilities.
- promote sanitation and over-all sound management.
- ensure minimum requirements for livestock developments for the benefit of planners, credit agencies and pollution control program administrators.
- promote use of animal wastes in crop production.
- provide flexibility in interpreting guidelines to account for varying situations throughout the province.

The code covers isolation distances between confinement operations and population centres or water bodies.

Also included are design and construction guidelines and requirements, recommendation on waste management including manure application rates for land, procedures for using the code and agencies to contact.

Copies of the code should soon be available from district agriculturalists.

Citizen participation leads to guidance

Man and Resources ends

A lawyer and a farmer sit engrossed in a discussion on education while nearby a young student wrestles with the question of citizen participation in government decision making.

Unusual combinations of people discussing unlikely topics? Definitely. But that was a regular occurrence in November when the Man and Resources program held its final meeting in Toronto.

The three-day conference was the culmination of a two-year effort to develop citizen comment and opinion on resource development and management in Canada.

The recommendations of the program have gone to the Canadian Council of Resource and Environment Ministers which sponsored, at a cost of about \$1 million, the Man and Resources program. The 10 provinces and the federal government belong to the council.

When the council approved the program, the purpose was "to provide a national forum for the debate concerning the formulation and recommendation of guidelines to achieve and sustain an optimum balance of social and economic benefits derived from the national resource base."

The national forum was certainly achieved with more than 15,000 people across the country taking part in the program.

In preparation for the conference, small groups were organized in rural and urban areas. They first defined what areas of resource management were of concern, then began forming guidelines for recommendation to government.

The conference brought together experts, representatives from the citizen meetings and others from special-interest bodies and government.

Discussions were held in small groups at the conference during the day. Each group sent one representative, or rapporteur, to an evening co-ordinating session.

The objective was to reach a consensus on the 12 areas of concern and make recommendations that governments could consider in forming policy.

The rapporteurs also observed at their final session that man does not stand outside the environment with the freedom to abuse or respect it.

"Historically, man has exploited the earth's natural resources to meet his needs and desires. Indeed, in the developed nations we have become 'resource gluttons'.

"In Canada, we must move from being a consuming society to a conserving society."

They also said the Man and Resources program is an example of how governments can involve the public in planning and urged that citizens be encouraged to participate more in government decision making.

Governments must heed results -- Yurko

W. J. Yurko, Alberta environment minister and chairman of the Canadian Council of Resource and Environment Ministers, told the Man and Resources delegates they had "set down many stepping stones leading to the future well-being of Canada and Canadians.

He compared their meeting with the Resources for Tomorrow conference in the 1960's which preceded a decade of resource development.

"The Man and Resources program has laid the foundation for a decade of resource conservation."

What government policies would result from the Man and Resources guidelines was impossible to say, but governments "must plan and act in accord with what has been distilled here as being in the Canadian interest."

He gave support to many of the recommendations, including some from the foreign ownership section. In a speech to delegates, he agreed that renewable resources such as land, water and forests should gradually be "restored to domestic ownership."

"What generally commands near-unanimous agreement is that a nation that loses control and ownership of its renewable resources jeopardizes the basis of its nationhood."

Efforts to relax environmental requirements because of the current energy situation would be a retrograde step.

"the whole environmental movement evolved to cure some basic ills in our society.

".... a slowdown or interruption to the drive toward environmental sanity would prove harmful in the long term."

Although conservation of resources will be practiced more, he said, growth in Canada will not stop in the near future.

".... the majority still want and need meaningful employment and the primary process for generating those jobs has been growth.

"Until a new acceptable solution is found... growth will continue as a needed objective of our society.

"Nevertheless, growth and conservation, growth and the quality of life, can and will be brought into better balance.

Man and Resources

Following is a condensation of conference recommendations.

CITIZEN PARTICIPATION: More public participation is needed because "the ballot box and market place, which are traditional indicators of the public's preferences, need to be supplemented by a more sensitive and effective method."

--The democratic structure should be changed to increase public participation and guarantee the right to participate.

--Participation should occur at the planning and decision stages.

--Political campaign funds should come from the public purse with candidates required to account for spending.

--Government should provide a forum to resolve conflicts between citizen groups and individuals.

The conference made eight specific recommendations to achieve the general goals, including an Environmental Bill of Rights to guarantee any citizen a healthy and attractive environment.

POPULATION: Growing environmental problems and the wasteful consumption of national resources has caused deep concern about the quality of urban and rural life. Governments should:

--Develop a national population policy to end growth by 2000.

--Increase population and family planning education.

--Encourage decentralization and redistribution of population.

--Increase aid for technical, capital and population problems.

--Establish an agency to direct and promote research into public awareness of population problems.

GROWTH ETHIC AND SOCIAL VALUES: Present social values represent a trade-off between a desire for material well-being and a desire for a better quality of life. Emphasis has been on material items; we must strike a better balance in favor of preserving resources and gaining social justice.

Sixteen recommendations were made to achieve the basic objectives, which are:

--Reappraisal of social and economic systems taking into account depleting non-renewable resources and the support capacity of renewable resources.

--Meeting basic human needs such as food, shelter and constructive relationships.

--Allowing personal development and social justice beyond the basic needs.

--Pursuing these objectives while considering other cultures and placing a high value on cultural and personal diversity.

ENVIRONMENTAL PROTECTION: Man is an integral part of the environment and depends on its functioning for his long-term survival. Man has become increasingly out of balance with nature; he must accept stewardship of nature and recognize the need for a change in lifestyles.

The environment is a dynamic system in which a change in one place produces adjustments in several other components. We cannot view our actions in terms of one-cause, one-effect relationships.

In nature, all materials are recycled. Waste in one component is the raw material of the next. Man must devote a major effort to recycling.

Research into environmental problems must continue but the need for more knowledge must not delay action. Further environmental damage must be prevented now and better solutions to problems incorporated as they are developed.

ENERGY: Governments should develop energy policies to achieve:

- Canadian control of all energy sources.
- Plans to maximize the benefits and security of these resources for all Canadians.
- Equal importance for conservation of energy and reduction of consumption compared with provision of greater energy supplies.

Guidelines to reduce growth of energy use included high licence fees for powerful vehicles, promotion of public transportation, a reduction in economic growth and formation of government divisions of energy conservation.

OWNERSHIP: Ownership involves an obligation to properly manage resources and get optimum benefit from them in a manner consistent with social objectives.

- The owner of a resource must be held accountable for its management. Canadian resources must be managed in the best interest of all Canadians.
- Governments concerned with resources use should adopt legislation requiring the exchange of opinions among citizens, experts and government officials before forming development plans.

--The marketplace is an inadequate instrument for the management of resources and the environment and therefore public intervention is necessary to serve society's interests.

FOREIGN OWNERSHIP: Much of the concern over foreign ownership is with the management and use of land and resources rather than with the pattern of ownership itself. It is one aspect of the question of society's rights in relation to those of resources owners and users.

Land--Regulate ownership and use through restrictive legislation, selective taxation, land banking or zoning.

Media--Incentives are needed for local programming and Canadian publishing. Increased financial, human and physical resources should be allocated to developing local and national cultural activities.

Industry--A government agency is needed to approve or prohibit, on the basis of Canadian interest, any foreign take-over of Canadian businesses or foreign entry into an industry. The agency should also review current ownership with power to order retrieval to Canadian control of any venture.

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Natural Resources--Government policies should promote Canadian ownership of all resource development with the emphasis on managing, not marketing, resources. Sovereignty should be proclaimed over the continental shelf.

Unions--Canadian workers should approve the constitutions of unions operating in Canada and funds generated by them should be retained for use in Canada.

Education--Canadian, including native, content and authorship of texts should be encouraged. Permanent education appointments should only go to Canadians with no concessions to foreign educationists in job competition.

Research and Development--Funding of Canadian technical, academic and industrial research should be encouraged.

EDUCATION: The central theme of environmental education is that it is to promote an understanding from which an environmental ethic is developed and from which Canadians can act to meet environmental problems.

--Support of environmental education is needed by the Canadian Council of Education Ministers.

--Elementary and secondary school systems should pursue environmental education within existing programs and through traditional subject areas.

--Post-secondary schools should follow an interdisciplinary approach on environmental research and programs, including extension courses.

--Environmental studies should be a part of all teacher training and teachers should be encouraged to include the topic in programs and projects.

--Individuals have the responsibility for informing themselves, through continuing education, community groups and other formal and informal means.

--Governments should issue environmental information in a form that can be adopted to education programs and should promote environmental education, such as through cable television.

--Media should regularly be given background information on specific environmental topics and be encouraged to develop environmental specialists.

--Government information should be made public.

--Ministries of education should institute programs for information retrieval and co-ordination, make inventories and encourage production of data.

QUALITATIVE AND QUANTATIVE DATA: Less than optimal decisions have been made regarding the development of Canadian resources because of a lack of qualitative and quantitative information and an inability to communicate existing knowledge.

Identifying information--More studies are needed, including one to learn where information is lacking; these should be aimed mostly at prospective needs. Data presentation and cost-benefit methodology needs standardization. Interdisciplinary co-ordination is lacking.

Communicating Information--All environmental information should be made available for public scrutiny; central and regional data retrieval centres are needed for information dissemination.

Using--The question is whether information will be used. Using consists of persons becoming better informed or aware. Use of information can help various organizations develop independent views on resource priorities.

Evaluating--Government should be required to publish environmental impact analysis before deciding upon significant projects. The analysis must be professional, comprehensive and accessible to the public.

LONG-TERM AND INTEGRAL PLANNING: North Americans in general are resource gluttons but many on this continent do not have an adequate life-style in terms of material goods and standard of living. There is a greater lack in poor countries. Regardless, an effort must be made at reducing the world's rate of resource consumption.

- Governments should initiate comprehensive, long-term resource planning involving citizen participation.
- Citizens of a region need mechanisms to ensure they can participate in the planning, ownership and management of local projects.
- To produce worthwhile citizen participation, provision of information, such as through data banks, is needed.
- The media should be made available for open public discussion of developments.
- Government should provide research funds to allow intangibles, such as the quality of life, to be measured objectively for inclusion in development assessment.

NORTHERN DEVELOPMENT: Development now means using resources for the benefit of the nation, mainly the south. A more adequate meaning would increase the responsibilities and benefits for the northern natives. Northern includes parts of some provinces, not just the territories.

Native Rights--Must be defined, preferably through negotiation between natives and government. Aboriginal land claims require settlement.

Political--Territorial governments should be autonomous and responsible; local government is needed.

Citizen Participation--Should be guaranteed in the planning and decision phases of resource development by constitutional and legal structures.

Economic Development--Must be paced so northerners can benefit within their cultural and social framework.

Environment Protection--The ecology of the north presents special problems. Environmental implications of projects must get full public review, and approval, before proceeding. Sewage treatment needs improvement.

Education--Indigenous languages should be used along with a multicultural approach.

Communication--Radio and television production facilities are needed as are two-way radio links for all northern settlements.

Man and Resources

Transportation--Government programs aimed at improving air, land and water transportation should be accelerated with priority on improving social conditions in northern communities.

NATIVES: LAND AND RESOURCES: The native people have a strong heritage of respect for the land...they have always believed that the land and its resources are to be shared for the common good, not an exclusive few.

- Resource development must be preceded by adequate study by native people and funds must be available for this.
- Loss of enjoyment of land because of development must be preceded by a negotiated settlement with the natives.
- Current projects should be halted until the above conditions are met.

Periodicals indexed, available

The department library has compiled its KWIC Index for environmental articles in journals held by the library. It will be issued monthly.

The KWIC is exchanged for similar indices from other libraries, such as those at Imperial Oil and the Boreal Institute for Northern Studies at the University of Alberta.

The library also has available, and catalogued in depth, original material and maps from the Peace-Athabasca Delta project, none of which have been published in technical reports.

Trash program aimed at spring clean up

Anti-Litter Week, known last year as Littercheck, will be held May 6-12 throughout the province.

Activities in the week are organized by Outdoors Unlittered through the co-operation of municipalities, schools, community groups and the provincial government.

Litter Patrols are being formed in schools and materials, such as litter bags, bumper stickers and garbage can stickers will be available.

A sister organization in British Columbia promotes a similar anti-litter week program in that province.

The aim of the week is not only to beautify through litter cleanup, but to encourage people not to litter in the first place.

Control device grabs fly ash

Calgary Power Ltd. has installed specially designed dust control equipment at its Sundance power plant on Lake Wabamum west of Edmonton.

The key part of the control system is an electrostatic precipitator on the boiler stacks which works on the principle that small particles, such as fly ash resulting from coal combustion, can be attracted to a surface carrying an electrical charge.

To obtain top efficiency the Sundance equipment was designed for conditions at the plant, and is among the most effective in the province.

The licence the environment department granted for operation of the plant restricts maximum particulate emissions to .20 pounds of solid matter per 1,000 pounds of gases leaving the stack. Emissions with the percipitators operating, average .047 pounds.

The licence also requires monitoring of particulates in the area and of the atmosphere for sulphur dioxide and oxides of nitrogen. Similar data must also be collected for the stack gases.

PEP aids erosion control, cleanups

More than 50 projects expected to create nearly 600 jobs have been approved by the environment department under the provincial Priority Employment Program.

The department was allotted \$1.1 million as its share of the \$12-million program intended to ease winter unemployment.

The department divided its allotment about 60 per cent to projects funded totally by the department and 40 per cent for those funded on a 50-50 cost sharing basis with local authorities such as cities, towns or counties.

The largest area of expenditure was for erosion protection with 15 projects taking a total of \$348,000, including local authorities' contributions.

This included the largest single project--\$120,000 for erosion protection at the water intake for Grande Prairie, which shared in the funding.

Another \$110,000 was allocated to control lake shore erosion at Lac La Biche.

A breakwater pier is being constructed at Fort Chipewyan at a cost of \$100,000, and a land-fill wharf costing \$70,000 has been approved for Pigeon Lake.

Other projects include clearing of debris from channels, brushing of reservoirs, garbage-dump cleanup and waterline projects.

Strict guidelines will be followed on the debris clearing projects.

Funds for the program were announced in mid-October and 125 submissions for projects were made for the environment department allocation.

Around the department . . .

This new section of Environment News is to provide short reports on various activities in the environmental field. The first part deals with the provincial environment department, while the second involves other groups and activities.

The standards and approvals division granted 93 approvals during November, including permits to construct, and licences to operate and received 40 applications during November.

Recent major approvals included: (Some were before November)

--Permits and licences to Canada Cement Lafarge Ltd. for expansion of its cement plant at Exshaw. Prime requirements are for control devices to limit dust pollution and monitoring of dust in the area.

--Licences to Imperial Oil Enterprises Ltd. for operation of its Strathcona refinery just east of Edmonton. Licences set the maximum amount of contaminants that can be released to the air or water and requires monitoring.

--Permits to Syncrude Canada Ltd. to construct its extraction plant at the Athabasca Oil Sands near Fort McMurray. Sets maximum limits for emissions of waste gases, solids and liquids. A licence is also required before production starts in 1978.

--Also to Syncrude, permits for construction of sewage and water treatment facilities for a 500-man construction camp.

--Permit to Fort McMurray to enlarge its water supply and treatment facilities.

--Permit to the Village of Bellevue for construction of sewage treatment facilities. The village was earlier served a water quality control order and required to improve its sewage treatment.

The water quality control orders and the emission control orders (for air quality) are used by the department as a quick and effective means for reducing pollution or setting deadlines by which a plant must meet clean air or water standards.

No water quality control orders were issued in November but five emission control orders were made.

Recent major control orders: (Some were before November)

--Emission control orders to Natal Forest Products Ltd. of Coleman, Timberline Ranch Ltd. of Frank and Revelstoke Co. Ltd. of Sentinel because of excessive smoke from waste wood burning. Companies given until April 30, 1974, to advise how they will meet clean air standards.

--Emission control order to Canada Safeway Ltd. to immediately stop excessive smoke from its incinerator at the Meadowlark shopping centre in Edmonton.

An odor survey around the Agrimart livestock operation in northeast Calgary has shown no objectionable smells associated with the plant.

The survey was conducted for one week before and one week after operation started. Only one objectionable smell was found and it came from a truck which parked in the area but which did not deliver livestock to the centre.

The first meeting of the Environmental Education Coordinating Committee was held with representatives of agriculture, education, lands and forests, environment and culture, youth and recreation.

Purpose is to improve coordination of programs, eliminate duplication and facilitate planning.

The air pollution level in Calgary exceeded 100 (severe air pollution) three times in November. The air quality index hit peaks of 113 Nov. 12, 130 Nov. 23, and 127 Nov. 27.

. . . and elsewhere

A study in Illinois in 1972 showed that producing and delivering soft drinks in non-refillable throwaway glass containers took 4.4 times as much energy as producing them in refillable containers that were used 15 times.

Soft drink cans required 11 per cent less energy than the throwaway glass containers but 2.9 times as much as the refillable glass bottles.

The cost of soft drinks in throwaways was estimated to be 30 per cent more than with returnables.

Outdoors Unlittered has started a film library and is currently offering two titles: the Litterbug, an eight-minute Walt Disney production; and The Litter Monster, a 17-minute motivational film.

Films are distributed at no cost and are aimed at schools. Bookings can be made through district library superintendents.

The Federation of Alberta Naturalists has established an Alberta Ornithological Records Committee to authenticate reports of bird sightings and breedings in the province.

Until now, bird observations have been reported and sometimes published without any established criteria or standards for acceptability.

Most car exhausts pass

Cars built in North America fared better than imported models in tests last summer of exhaust emissions.

The tests were made on 6,870 vehicles in June through September by the environment department and the Alberta Motor Association.

Emission levels indicative of a clean-running car were exceeded by 39.9 per cent of the North American models while 45.4 per cent of the imports failed.

The voluntary tests measured percentage of pollutant in the exhaust gases, not total amount.

Of all vehicles tested, 40.8 per cent failed, most of them because of too much carbon monoxide.

Vehicles built in 1966, 1967 and 1968 were allowed seven per cent carbon monoxide and 32 per cent of them failed.

Newer models were allowed 4.5 per cent carbon monoxide and 47 per cent of them failed, although they generally had a lower percentage than the older models. This was attributed to emission control devices.

Vehicles were also tested for hydrocarbon emissions but only four per cent failed in this category.

A car giving off seven per cent carbon monoxide is allowed 1.65 per cent hydrocarbon and one with 4.5 per cent carbon monoxide is allowed 1.35 per cent hydrocarbons.

The hydrocarbon test was failed by 3.9 per cent of the North American models and 4.7 per cent of the imports.

The two testing facilities, which are in camper units mounted on trucks, are to travel throughout the province until next June.

One of the objectives of the program is to identify the automobile to the public, as a major contributor to air pollution.

Last summer's biting and itching may not have repeat next season

Swat, slap, smash. Buzz, bite, itch.

Mosquitos last summer made tourists stay away, cattle refuse to graze and nearly everyone miserable.

But it wasn't all bad, says Dave Pledger, the co-ordinator of biting fly programs for the environment department.

More communities now are concerned with the problem and have indicated they plan to undertake approved control programs.

At the start of 1973, only Lethbridge, Calgary and Edmonton operated such control programs. Brooks and Fort Saskatchewan started later and eight more areas could join next year.

To further improve mosquito control, the Alberta Mosquito Control Committee has established a three-man subcommittee to investigate the feasibility of a regional mosquito control program.

Discussions have been held with representatives of Edmonton and surrounding communities on a regional control program.

The chief concern is the cost of the individual programs.

Snow disposal licences approved; require studies to reduce amounts

The environment department has issued licences to the cities of Calgary, Edmonton and Red Deer to allow for disposal of snow.

One condition on the Calgary and Edmonton licences is that the cities undertake studies into how to reduce the amount of snow stockpiled and how to minimize dumping into watercourses.

All the licences prohibit the release of toxic substances to watercourses and require sampling of the accumulated snow for analysis of pollutants.

The cities must also monitor the amount of sand, salt and other chemical de-icers spread on the streets. A study of the dispersal and final disposition of sand and silt in the North Saskatchewan River in Edmonton and the Bow and Elbow Rivers in Calgary is required. Results go to the environment department.

In Ontario, the ministry of the environment has banned direct disposal of contaminated snow to watercourses "except under extreme emergency conditions."

Studies in that province showed that snow from high-use roadways, contained levels of polluting materials.

Waterworks help offered

The Alberta Municipal Waterworks Assistance Program has been developed to provide loans and grants to communities which otherwise could not afford a water system.

The three-part program includes federal and provincial funds, depending on the community and type of waterworks.

Aims of the program are to encourage balanced growth throughout the province and overcome inequalities of location or population trends that could make a water system too expensive for a community.

The program does not apply to the water distribution system such as mains and hydrants which would be fairly standard in any municipality.

However, it does apply where inequalities can exist such as in developing a water supply, treatment facilities, transmission lines or storage reservoirs.

Part I - The Alberta Government Waterworks Program: Will provide on a half-loan, half-grant basis up to \$150 per capita.

Part II - The Agricultural Services Centres Program: It will operate under the same criteria as Part I but with the federal government providing the funds to specific communities designated as Agricultural Service Centres.

Part III - Water Supply Source Development: This is for small communities where conventional waterworks are uneconomic.

The province will offer up to \$2,500 grant to develop a central water source such as a well. Some communities might also be eligible for a \$550 federal grant.

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DELIVERY

